Contents Volume 96, 1992

Special Issue "The Geochemistry of Acid Groundwater Systems" by W.B. Lyons, D.T. Long, A.L. Herczeg and M.E. Hines (Guest-Editors)
Preface, by W.B. Lyons, D.T. Long, A.L. Herczeg and M.E. Hines (Guest-Editors)
Hydrological processes in the Tyrrell Basin, southeastern Australia
P.G. Macumber (Melbourne, Vic., Australia)
A stable isotope investigation of groundwater-surface water interactions at Lake Tyrrell, Victoria, Australia A.L. Herczeg (Glen Osmond, S.A., Australia), C.J. Barnes (Canberra, A.C.T., Australia), P.G. Macumber (Melbourne, Vic., Australia) and J.M. Olley (Canberra, A.C.T., Australia)
Geochemistry of acid brines: Lake Tyrrell, Victoria, Australia
D.T. Long, N.E. Fegan (East Lansing, Mich., U.S.A.), W.B. Lyons, M.E. Hines (Durham, N.H., U.S.A.), P.G.
Macumber (Melbourne, Vic., Australia) and A.M. Giblin (North Ryde, N.S.W., Australia)
Sedimentary biogeochemistry of an acidic, saline groundwater discharge zone in Lake Tyrrell, Victoria, Australia
M.E. Hines, W.B. Lyons, R.M. Lent (Durham, N.H., U.S.A.) and D.T. Long (East Lansing, Mich., U.S.A.) 53
Rare-earth element distribution in Lake Tyrrell groundwaters, Victoria, Australia
J.A. Fee, H.E. Gaudette, W.B. Lyons (Durham, N.H., U.S.A.) and D.T. Long (East Lansing, Mich., U.S.A.) 6
Naturally-occurring radionuclides in acid-saline groundwaters around Lake Tyrrell, Victoria, Australia
B.L. Dickson (North Ryde, N.S.W., Australia) and A.L. Herczeg (Glen Osmond, S.A., Australia)
The trace-metal geochemistry of the Lake Tyrrell system brines (Victoria, Australia)
W.B. Lyons, S. Welch (Durham, N.H., Australia), D.T. Long (East Lansing, Mich., U.S.A.), M.E. Hines
(Durham, N.H., U.S.A.), A.M. Giblin (North Ryde, N.S.W., Australia), A.E. Carey (Cambridge, Mass.,
U.S.A.), P.G. Macumber (Melbourne, Vic., Australia), R.M. Lent (Durham, N.H., U.S.A.) and A.L. Herczeg
(Glen Osmond, S.A., Australia)
Source, distribution and economic significance of trace elements in groundwaters from Lake Tyrrell, Victoria,
Australia
A.M. Giblin and B.L. Dickson (North Ryde, N.S.W., Australia)
Deposition of trace elements and radionuclides in the spring zone, Lake Tyrrell, Victoria, Australia
B.L. Dickson (North Ryde, N.S.W., Australia) and A.L. Herczeg (Glen Osmond, S.A., Australia)
Metal partitioning in acid hypersaline sediments: Lake Tyrrell, Victoria, Australia
N.E. Fegan, D.T. Long (East Lansing, Mich., U.S.A.), W.B. Lyons, M.E. Hines (Durham, N.H., U.S.A.) and
P.G. Macumber (Melbourne, Vic., Australia)
Formation of alunite, jarosite and hydrous iron oxides in a hypersaline system: Lake Tyrrell, Victoria, Australia
D.T. Long, N.E. Fegan, J.D. McKee (East Lansing, Mich., U.S.A.), W.B. Lyons, M.E. Hines (Durham, N.H.,
U.S.A.) and P.G. Macumber (Melbourne, Vic., Australia)
Chemical, crystallographic and stable isotopic properties of alunite and jarosite from acid-hypersaline Australian
lakes
C.N. Alpers (Menlo Park, Calif., U.S.A.), R.O. Rye (Denver, Colo., U.S.A.), D.K. Nordstrom, L.D. White
and B-S. King (Menlo Park, Calif., U.S.A.)
Mechanisms of iron photoreduction in a metal-rich, acidic stream (St. Kevin Gulch, Colorado, U.S.A.)
B.A. Kimball, D.M. McKnight, G.A. Wetherbee and R.A. Harnish (Denver, Colo., U.S.A.)
Special Issue "Silicate Melts", by Y. Bottinga, D.B. Dingwell and P. Richet (Guest-Editors)
Preface, by Y. Bottinga, D.B. Dingwell and P. Richet (Guest-Editors)
Solubility and diffusion of noble gases in vitreous albite
K. Roselieb (Göttingen, Federal Republic of Germany), W. Rammensee (Köln, Federal Republic of Germany), H.
Büttner and M. Rosenhauer (Köln, Federal Republic of Germany)

Na and Ca tracer diffusion in plagioclase glasses and supercooled melts	
H. Behrens (Hannover, Federal Republic of Germany)	267
Olivine growth rates in a tholeittic basalt: An experimental study of melt inclusions in plagioclase	
A. Jambon, P. Lussiez (Paris, France), R. Clocchiatti, J. Weisz (Saclay, France) and J. Hernandez (Lausanne,	
Switzerland)	277
Water solubility in aluminosilicate melts of haplogranite composition at 2 kbar	
F. Holtz, H. Behrens (Hannover, Federal Republic of Germany), D.B. Dingwell (Bayreuth, Federal Republic of	
Germany) and R.P. Taylor (Ottawa, Ont., Canada)	. 289
Phase relations and compositional dependence of H ₂ O solubility in quartz-feldspar melts	
M. Pichavant (Orléans, France), F. Holtz (Hannover, Federal Republic of Germany) and P.F. McMillan (Tempe,	
Ariz., U.S.A.)	303
Raman spectroscopy of silicate melts at magmatic temperatures: Na ₂ O-SiO ₂ , K ₂ O-SiO ₂ and Li ₂ O-SiO ₂ binary	
compositions in the temperature range 25-1475°C	
B.O. Mysen and J.D. Frantz (Washington, D.C., U.S.A.)	. 321
Al and Si coordination in SiO2-Al2O3 glasses and liquids: A study by NMR and IR spectroscopy and MD simulations	
B.T. Poe, P.F. McMillan, C.A. Angell (Tempe, Ariz., U.S.A.) and R.K. Sato (Mountain View, Calif., U.S.A.)	. 333
Vibrational spectroscopy of silicate liquids and glasses	
P.F. McMillan, G.H. Wolf and B.T. Poe (Tempe, Ariz., U.S.A.)	. 351
²⁷ Al NMR spectroscopy of aluminosilicate melts and glasses	
B. Coté (Aubervilliers, France), D. Massiot, F. Taulelle and JP. Coutures (Orléans, France)	367
The structure and dynamics of alkali silicate liquids: A view from NMR spectroscopy	
J.F. Stebbins, I. Farnan and X. Xue (Stanford, Calif., U.S.A.)	. 371
²⁹ Si and ²⁷ Al MAS-NMR spectroscopy of glasses in the system CaSiO ₃ -MgSiO ₃ -Al ₂ O ₃	
G. Libourel, C.A. Geiger, L. Merwin and A. Sebald (Bayreuth, Federal Republic of Germany)	387
The interaction between water and aluminosilicate magmas	
S.C. Kohn (Coventry and Manchester, U.K.), R. Dupree and M.G. Mortuza (Coventry, U.K.)	399
Pressure-induced structural modifications and amorphization in olivine compounds	
F. Guyot (Paris, France) and B. Reynard (London, U.K.)	411
Coordination variability and the structural components of silica glass under high pressures	
J.R. Rustad, D.A. Yuen (Minneapolis, Minn., U.S.A.) and F.J. Spera (Santa Barbara, Calif., U.S.A.)	421
Thermodynamic model and physico-chemical properties of silicate melts	
V. Daněk and T. Ličko (Bratislava, Czechoslovakia)	439
Shear, volume, enthalpy and structural relaxation in silicate melts	
S.L. Webb (Bayreuth, Federal Republic of Germany)	449
CaO-MgO-Al ₂ O ₃ -SiO ₂ -Na ₂ O (CMASN) at 1 bar from low to high Na ₂ O contents: Topology of an analogue for alkaline	
basic rocks	
H. Soulard, A. Provost and P. Boivin (Clermont-Ferrand, France)	459
Contents Volume 96, 1992	479

